

# MATERIAL SAFETY DATA SHEET

MSDS NUMBER

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4 HOUR EMERGENCY A	ASSISTANCE	GENERAL MSDS ASSISTANCE	
SHELL: 713-473-9461 C	HEMTREC: 800-424-9300	SHELL: 713-241-4819	BE SAFE READ OUR PRODUCT
ACUTE HEALTH * FIRE	REACTIVITY HAZARD RATING		SAFETY INFORMATION
	chronic health effects refer to the	HIGH - 3 EXTREME - 4	PRODUCT LIABILITY LAW

SECTION I	NAME		The second second
PRODUCT PON(R) RESIN 828	. TOURDON SINT SON COMETINATES ARES		Production of the series
CHEMICAL BISPHENDL A/EPICHLOROHYDRI	N EPOXY RESIN	ange in the second seco	
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SHELL CODE 43240	2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -		

SECTION II-A	PRODUCT/INGREDIENT		7 47 46 22 46 22
NO. DESERVOID DESERVO DE LO	COMPOSITION	CAS NUMBER	PERCENT
P RISPHENDI A/EDICHIOROHYI	NDIN FDNYV DESIN	25068-38-6	100

THIS PRODUCT IS AN EPOXY RESIN PRODUCED BY THE CONDENSATION REACTION OF EPICHLOROHYDRIN AND BISPHENOL-A. THESE RAW MATERIALS ARE CONSUMED IN THE PROCESS. RESIDUAL LEVELS OF EPICHLOROHYDRIN ARE CONTROLLED TO 1 PPM, MAX., IN THE PRODUCT. RESIDUAL LEVELS OF BISPHENOL-A ARE TYPICALLY 1-10 PPM TOUGOSS SO 231717 HAND 368AU 3630 HU YRAZZADSK 21 TKINTKART OK UARINSKI DE DEFEMOV 301 OFF TOK U \* 2019/UA LAZKISM TAO REVERDE OF TREME 38A

SECTION II-B	ACUTE	TOXICITY DATA		
ND. ACUTE DRAL LD50		ACUTE DERMAL LD50	ACUTE INHAL	ATION LC50
P 11.4 G/KG (RAT) P 15.6 G/KG (MOUSE)		> 20 M/KG (RABBIT)	NO DEATHS I	N SAT'D AIR, 8 HR*

\*THIS INHALATION TEST MAY NOT BE RELEVANT DUE TO LOW VOLATILITY OF THE RESIN. MOSTAMORIAN OF SETS ASSESSED FRANCE

# SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

#### EYE CONTACT

BASED ON PRODUCT TESTING PRODUCT IS MODERATELY IRRITATING TO THE EYES. CONTACT WITH PRODUCT AT ELEVATED TEMPERATURES CAN RESULT IN THERMAL BURNS.

### SKIN CONTACT

BASED ON PRODUCT TESTING PRODUCT IS MODERATELY IRRITATING TO THE SKIN. BASED ON PRODUCT TESTING PRODUCT MAY CAUSE SKIN SENSITIZATION. CONTACT WITH PRODUCT AT ELEVATED TEMPERATURES CAN RESULT IN THERMAL BURNS.

#### INHALATION

BECAUSE OF ITS LOW VOLATILITY THIS PRODUCT IS NOT LIKELY TO BE AN INHALATION HAZARD.

## INGESTION

BASED ON PRODUCT TESTING PRODUCT IS CONSIDERED TO HAVE A LOW ORDER OF ACUTE ORAL TOXICITY.

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SIGNS AND SYMPTOMS
IRRITATION AS NOTED. SKIN SENSITIZATION (ALLERGY) MAY BE EVIDENCED BY RASHES, ESPECIALLY HIVES.

AGGRAVATED MEDICAL CONDITIONS

PREEXISTING SKIN AND EYE DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. PREEXISTING SKIN OR LUNG ALLERGIES MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS FROM EXPOSURE TO THIS PRODUCT.

SECTION IV

NO.

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL/TWA

CONTRACTOR MALORS CONTRACTOR 900 CANADONS F189AS

AC PEL/CEILING TLV/TWA

ACGIH

TAREAST AND A TOLERAND.

APAR YYTCHTHOT BYLISA

TLV/STEL

NO OSHA NOR ACGIH LIMITS HAVE BEEN ESTABLISHED FOR THIS PRODUCT.

SECTION V

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

IF CONTACT WITH HOT PRODUCT OCCURS IMMEDIATELY FLUSH WITH COOL WATER FOR 15 MINUTES. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT

REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED. CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, CANNOT BE DECONTAMINATED AND SHOULD BE DESTROYED TO PREVENT REUSE. \*\*CONTINUED UNDER NOTE TO PHYSICIAN \*\*

INHALATION

REMOVE VICTIM TO FRESH AIR AND PROVIDE DXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION

DO NOT INDUCE VOMITING. IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE.\*

NOTE TO PHYSICIAN

\*IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, E.G., NEAT EPOXY RESINS. SKIN CONTACT, CONT'D: IF CONTACT WITH HOT PRODUCT OCCURS IMMEDIATELY FLUSH WITH COOL WATER FOR 15 MINUTES. CAREFULLY REMOVE CLOTHING; IF CLOTHING IS STUCK TO A BURN AREA DO NOT PULL IT OFF, BUT CUT AROUND IT. COVER BURN AREA WITH A CLEAN MATERIAL. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION VI

SUPPLEMENTAL HEALTH INFORMATION

ALTHOUGH THE SIGNIFICANCE IS UNKNOWN, PRODUCT HAS BEEN SHOWN TO BE MUTAGENIC IN SOME MICROBIAL TESTS, BUT HAS FAILED TO SHOW MUTAGENICITY IN OTHERS. CHROMOSOMAL ABERRATIONS WERE OBSERVED IN CULTURED RAT LIVER CELLS.

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PHYSICAL DATA

BDILING PDINT: >500\* SPECIFIC GRAVITY: 1.17 VAPOR PRESSURE: 0.03 AT (DEG F) (MM HG) 77 DEG C

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BOE-C6-0226149

PRODUCT NAME: EPON(R) RESIN 828

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(DEG F)

MELTING POINT: NOT AVAILABLE

SOLUBILITY: NEGLIBLE (IN WATER)

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VAPOR DENSITY: NOT APPLICABLE

(AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT APPLICABLE

\*SEE FLASH POINT

APPEARANCE AND ODOR: VERY LIGHT YELLOW, VERY VISCOUS LIQUID. 

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:

FLAMMABLE LIMITS /% VOLUME IN AIR

EXTINGUISHING MEDIA
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS

NO UNUSUAL HAZARDS.

SECTION IX REACTIVITY

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STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS, STRONG LEWIS OR MINERAL ACIDS, AND STRONG MINERAL AND ORGANIC BASES/ESPECIALLY PRIMARY AND SECONDARY ALIPHATIC AMINES.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE, ALDEHYDES, ACIDS, AND OTHER ORGANIC SUBSTANCES MAY BE FORMED DURING COMBUSTION OR ELEVATED (>500 DEG F) TEMPERATURE DEGRADATION. REACTION WITH SOME CURING AGENTS MAY PRODUCE CONSIDERABLE HEAT. RUN-A-WAY CURE REACTIONS MAY CHAR AND DECOMPOSE THE RESIN SYSTEM, GENERATING UNIDENTIFIED FUMES AND VAPORS WHICH MAY BE TOXIC.

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RESPIRATORY PROTECTION

NOT ORDINARILY REQUIRED.

AVOID CONTACT WITH EYES. WEAR SAFETY GLASSES OR GOGGLES AS APPROPRIATE. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL-RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT.

SECTION XI

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. LARGE SPILLS \*\*\* WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. \*\*\* SMALL SPILLS \*\*\* TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

WASTE DISPOSAL

IF THIS PRODUCT BECOMES A WASTE, IT WOULD NOT BE A HAZARDOUS WASTE BY RCRA CRITERIA (40 CFR 261). PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

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SPECIAL PRECAUTIONS

MEGG FRUE

STORE IN A COOL, DRY PLACE. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED. CAN CONTAIN HAZARDOUS PRODUCT RESIDUES. HANDLE IN ACCORDANCE WITH THE HAZARD POTENTIAL OF CURING AGENT(S) USED. CAUTION: MAY CAUSE IRRITATION. AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, CANNOT BE DECONTAMINATED AND SHOULD BE DESTROYED. 4.7.002.80862...74 TOTAL TOTAL CONTROL TRANSPORT CARROLLS

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- Cantaw with

WOLLEY YEARS

HEATING THIS RESIN ABOVE 300 DEG F IN THE PRESENCE OF AIR MAY CAUSE SLOW OXIDATIVE DECOMPOSITION ABOVE 500 DEG F, POLYMERIZATION MAY OCCUR. SOME CURING AGENTS, E.G., ALIPHATIC POLYAMINES CAN PRODUCE EXOTHERMIC REACTIONS WHICH IN LARGE MASSES CAN CAUSE RUNAWAY POLYMERIZATION AND CHARRING OF THE REACTANTS. FUMES AND VAPORS FROM THESE THERMAL AND CHEMICAL DECOMPOSITIONS VARY WIDELY IN COMPOSITION AND TOXICITY. DO NOT BREATHE FUMES. USE A NIOSH-APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER EXPOSURE. IN ACCORD WITH 29 CFR1910.134, USE EITHER AN ATMOSPHERE-SUPPLY RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

IF THIS RESIN IS HANDLED, SHIPPED, OR STORED IN BULK, THE RECOMMENDED PUMPING TEMPERATURE IS 180 DEG. F. MAX. TO PREVENT THERMAL BURNS. AVOID SKIN AND EYE CONTACT WITH HOT LIQUID.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION: NOT HAZARDOUS BY D.O.T. REGULATIONS D.O.T. PROPER SHIPPING NAME: NOT REGULATED

OTHER REQUIREMENTS:

SECTION XIV OTHER REGULATORY CONTROLS

THIS PRODUCT IS LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES. - AND THE PROPERTY OF THE PROP

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

Janginga innerg da sarawaano kerdi tabaharan 2001 kan 120 - Buratinga kubarah taa wakaratua barus kar ARGE SAILLE \*\*\* WEAR RESPIRATOR AND FROTECTIVE C.CTHING AS APPROPRIATE. SHUT OF SCHOOL OF LEAK. IF SAKE TO BO SO. DIME AND CONTAIN. REMINE GITH VACUUM TRUCKS ON AURO TO STORGERS VERSELLE.

SCAR UF RESIDUE WITH AN ABSONMENT SUCH AS CLAY. FAMO OR OTHER SHITANUE MATERIAL SCHOOLS OF PROFESIV. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. \*\*\* SHALL SPILLE \*\*\* TARE UP WETH AN

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DATE PREPARED: APRIL 22, 1987

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READ OUR PRODUCT READ OUR PRODUCT SAFETY INFORMATION ...AND PASS IT ON (PRODUCT LIABILITY LAW REQUIRES IT)

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SHELL OIL COMPANY PRODUCT SAFETY AND COMPLIANCE P. 0. BOX 4320 HOUSTON, TX 77210 HOUSTON,

EXTRACTOR NO TROUTED ONL JATESTAM TREESCHEL

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IF THIS PRODUCT SECONDS A WASTE, IT WOULD NOT BE A HAIARSOUS WASTE BY SCRA CRITERIE (40 CPR 2011). PLACE IN AN APPROPRIATE DISPOSAL FACTUITY IN COMPLIANCE WITH LOCAL RESULATIONS.